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RUCPDO/USDOC WASHDC 9152
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RHEHAAA/WHITE HOUSE WASHDC
RUCPDC/NOAA WASHINGTON DC
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SUBJECT: SEOUL ESTH UPDATE -AUGUST 2009

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Environment

Korea Proposes Greenhouse Gas Reduction Plans

1. On August 4, Korea proposed three options to cut its greenhouse gas emissions by 2020, saying it will determine the final implementation plan by the end of this year. The Presidential Committee on Green Growth (PCGG) unveiled three scenarios that seek to reduce emissions from 21 to 30 percent from estimated 2020 levels under a "business as usual" projection. The PCGG also described the 2020 overall reduction target scenarios in terms of an absolute reduction from the 2005 base year levels: Target Scenario One calls for holding emissions to within an eight percent increase over 2005 levels. Under this scenario, modest greenhouse gas emissions will be allowed until the "peak year" of 2020. Under Target Scenario 2, Korea would return to its 2005 baseline emissions levels by 2020

with a peak emissions year of 2015. Target Scenario Three is the most ambitious, calling for a reduction in emissions to four percent below 2005 levels by 2020 with the peak year occurring in 2012.

12. In order to achieve the target, Korea will undertake a number of measures, such as fostering the growth in use and supply of renewable energy, including nuclear energy, improving energy efficiency with smart power grid technologies, putting more hybrid cars on the road, and investing in the research and development of new technologies such as hydrogen fuel cells and light emitting diodes. The government announced earlier this year that it would invest 107 trillion won (USD 88 billion), or 2 percent of its annual GDP, in environment-related industries over the next five years. It is also pushing through stricter fuel efficiency and emission requirements for vehicles and energy efficiency standards on appliances.

13. According to data released by PCGG, Korea's greenhouse gas emissions almost doubled between 1990 and 2005. In 2005, Korea was the 16th largest greenhouse gas emitter in terms of total emissions, producing 594 million metric tons of carbon dioxide equivalents. On a per-capita basis, Korea ranked 6th in the world with emissions of 11.4 tons of carbon dioxide per person in 2005.

14. At an August 18 public hearing organized by the Korea Green Foundation's Climate Change Center, NGO representatives argued that the proposed reduction targets by 2020 are too low compared with other advanced countries. Business representatives, on the other hand, expressed reservations about the reduction goals, saying they should be voluntary, not mandatory. They pointed out that on June

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15 last year, members of the Federation of Korean Industry, the Korea Chamber of Commerce and Industry, and an Association of Small and Medium Enterprises agreed to adopt a voluntary target aiming to reduce the emissions of 28 industrial sectors by 40 percent below business-as-usual projections by 2020.

Atmospheric CO2 Concentration Hits
Record Levels in 2008

15. According to the "2008 Global Atmosphere Watch Report" recently published by the Korea Meteorological Administration (KMA), Korea's annual average carbon dioxide density in the atmosphere (measured at Korea's west coast of Anmeyon Island) increased slightly to a record level of 391.4 parts per million (PPM) in 2008 (up from 390 PPM in 2007). The figure is 6.5 PPM higher than global annual average of 384.9 PPM in 2008. The report says Korea's atmospheric carbon dioxide concentration is continuing to go up, but its gap with the global average has narrowed since 2005, due mostly to its domestic efforts in combating greenhouse gas emissions.

16. KMA data shows that the yearly average temperature in Korea has climbed by 1.5 degrees Celsius between 1908 and 2007 while global temperatures increased by about 0.74 degrees Celsius. No one is sure why Korea's average annual temperature increase is so much higher than the global average.

Government Unveils Renewable Energy Development Plan

17. The Ministry of Knowledge Economy (MKE) has a long-term goal of raising the share of renewable energy (solar, wind, biomass, hydrogen fuel cells, etc.) in the nation's total energy supply from 2.4 percent in 2007 to 11 percent by 2030. On August 24, the Presidential Committee on Green Growth (PCGG), chaired by the Prime Minister, approved MKE's renewable energy development plan to reach that goal. The plan provides a timetable mapping out the increasing share of renewable in the energy mix: 4.3 percent by 2015 and 6.1 percent by 2020. The plan outlines several strategies, including broad assistance from the government to the renewable energy industry to commercialize new technologies. The plan also calls for the government to introduce renewable portfolio standards (RPS), regulations which oblige energy suppliers to provide a certain percentage of their electricity from renewable energy sources. The

standards will become mandatory in 2012.

¶8. Other specific measures outlined in the plan include early dissemination and deployment of hydrogen fuel cells for residential electricity, promoted by the government through subsidies ranging from 30 to 80 percent of the cost of purchasing and installing hydrogen fuel cells to power and heat homes starting 2010 through ¶2020. The plan also calls on the government to expand domestic solar energy supply by 100 megawatts by 2011, an amount that could power 13,300 households. The plan also calls for constructing a 40 megawatt wind power complex on the reclaimed Saemangeum tidal flat by 2014 and for looking into the feasibility of creating a large wind farm by 2014 on the ocean along the west coast - a complex that would cost 400 billion won (USD322 million) and generate 100 megawatts of electricity.

Jellyfish Encumber Fisherman and Nuclear Power Plants

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¶9. According to a local news report of August 25, fishermen across the country are battling jellyfish that are thriving near seashores and wreaking havoc on local ecosystems. Kong In-chan, 54, who runs Keumjeong Fisheries in South Gyeongsang Province, said he usually catches 400 million won (USD 320,000) worth of anchovies per month, but in July he netted only 170 million won (USD 135,000) because of the jellyfish. "The ocean water is full of jellyfish," complained Huh O-ryong, 48, a commercial fisherman residing in Pohang, North Gyeongsang. "Once you pull up a net, you find 20 tons of jellyfish stuck in there. It takes about two hours to remove them all."

¶10. Jellyfish are also annoying workers at nuclear power plants, where they increasingly have been blocking gates needed to bring in cooling water. Some plants have been forced to interrupt operations because of the jellyfish. Ki Cheon-jae, a senior official at the nuclear power complex located in Younggwang, South Jeolla, operated by Korea Hydro and Nuclear Power Corporation, said, "Normally seven to eight workers are needed to take care of the gate, but we have increased that number up to 20 to deal with the jellyfish." The plant has been removing 10 to 40 tons of jellyfish a day since last month.

¶11. A researcher at the National Fisheries Research and Development Institute (NFRDI) said, "It is likely that the number of jellyfish has increased because of the rise of sea temperature caused by global warming and by water pollution," a researcher at NFRDI said. Most experts agree that nitrogen and phosphorous in run-off cause red phytoplankton blooms, creating low oxygen dead zones where jellyfish thrive; the creatures also prefer warmer water, and their populations have increased in recent years throughout the world in coastal waters where temperatures have increased above historical averages.

Science and Technology Unveils Blueprint to Boost Robotics Industry

South Korea Launches First Space Rocket, But Fails to Place Satellite into Orbit

¶12. South Korea's first space rocket blasted off at 5:00 pm local time on August 25 from the country's Naro Space Center, located 485 kilometers south of Seoul, but failed to place a small scientific satellite into its intended orbit, officials at the Korea Aerospace Research Institute said. The seven-time delayed launch of the Korea Space Launch Vehicle-1 (KSLV-1) took place six days after a software glitch halted the countdown just eight minutes before blast off. Korea undertook the multi-year project, which cost 502.5 billion won (USD 419 million), with Russian collaboration. Its first stage of its two-stage engine was built by Russia, while the second stage kick motor and payload fairing systems were domestically made in Korea. The two-stage KSLV-1 rocket was South Korea's first attempt at launching a space launch vehicle and the

Science and Technology Satellite-2 was the first Korean satellite launched from its own territory.

¶13. In a media briefing held on the morning of August 26, the Ministry of Education, Science and Technology (MEST), said that the first and second stage rockets of the KSLV-1 separated as planned

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after liftoff. One of the two fairings that held the satellite in place, however, failed to detach from the rocket after opening 9 minutes into the flight. MEST Vice Minister Kim Jung-hyun said, "The fairings weigh 300 Kg or three times more than the scientific satellite making it effectively impossible for the second stage rocket to generate the necessary thrust to keep the satellite in orbit." He added that the extra weight also affected stabilization and navigational control causing the rocket and payload to and steer upwards, instead of settling into a trajectory roughly parallel to the Earth. The second stage rocket and the satellite reached an altitude of 327 km before they separated, higher than the planned 303, with the satellite climbing to a further height of 387 km, after which it fell to Earth and was probably burned as it reentered the atmosphere.

¶14. President Lee Myung-bak called the launch a "half success," and called on the nation to further strive to realize the dream of becoming a space power. Korea is already planning for a second space rocket launch in May 2010.

Korea Boasts Fastest Internet Speed in World

¶15. A local newspaper reported on August 27 that Korea has the fastest average Internet connection speed in the world, quoting data of Communications Workers of America, the largest communications and media union in the U.S. The average Internet connection speed in Korea is 20.4 megabits per second (MPS) while Japan came in second with 15.8 MPS. Third fastest was Sweden with 12.8 MPS. In the United States, the average connection speed was 5.1 MPS ranking the country 28th in the world.

Government Announces Plans to Improve IT Development

¶16. On September 2, the Presidential Council for Future and Vision, the Ministry of Knowledge Economy, and the Korea Communications Commission announced a 189 trillion won (USD 151 billion) plan to improve the development of the IT sector over the next three years. Of the total investment, only about 7 percent will come from the government. The remainder is to be paid for by private industry, and the amounts are based on actual investment plans of 160 companies in the IT sector. A key part of the plan is to integrate information technology development with other industries, such as shipbuilding, energy and automobiles so that new IT technology and applications are more effectively responsive to industrial users' requirements. The plans also include providing scholarships to students conducting research to improve the country's mobile and smart phone industry. The plan also calls for the IT industry to invest more in raising the quality of semiconductors and in achieving ever faster Internet connection speeds.

Health

H1N1 Infections Soar as Schools Prepare for New Semester

¶17. The total number of confirmed H1N1 influenza cases in South Korea passed the 4000 mark on September 1st. About 85 percent of

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Korea's H1N1 cases have been diagnosed in the past six weeks, when the virus began spreading rapidly within Korea. That number is

expected to continue to climb steadily as schools prepare to re-open in September. So far, three Koreans have died from H1N1-related illness, for an estimated case fatality rate in Korea of less than one death per thousand cases. Two of the three persons who died reportedly were sick for more than one month before being tested and treated for H1N1. All but a handful of the 4000 confirmed H1N1 patients have suffered only minor flu symptoms.

¶18. Despite the low incidence of serious symptoms and low case mortality rate, Koreans are responding to the spreading outbreak with alarm. Forty-six schools have closed or delayed opening. The Ministry of Education, Science and Technology has directed schools that remain open to check the temperature of each student every morning before classes begin. Athletic and other school social events are being canceled. Local papers reported that Ewha Girls High School has put its community work for the disabled on hold. There has been a noticeable decrease in subway passengers and a corresponding increase in vehicular traffic as people are shunning public transportation. And one of the hottest selling items in Seoul these days is electric thermometers - selling now for 100,000 won (USD 80) apiece. The Public Administration and Security Minister recommended provincial and municipal governments to suspend events with more than 1000 participants. North Chungcheong Province cancelled the World Taekwondo Championship, which was to draw 700 athletes from 21 countries. The city of Gwangju canceled its World Tourism Expo and its Kimchi Festival, both scheduled for October. Incheon City may be forced to refund more than 200,000 tickets for its ongoing Global Fair and Festival.

¶19. The Prime Minister's Office announced that it has allocated an additional 125 billion won (USD 100 million) to purchase more anti-viral drugs by the end of the year, enough to vaccinate five million people, in addition to the existing stockpiles, which are enough to treat 5.3 million people. The government is also spending 108.4 billion won (USD 87 million) to develop an H1N1 vaccine and produce enough to vaccinate 13 million people. It hopes to be able to begin vaccinations in November.

Profile

Korea Institute for Science and Technology

¶20. The Korea Institute of Science and Technology (KIST) was founded in February 1966 following a joint statement made by President Lyndon Johnson and President Park Chung-hee on May 18, 1965 at the White House. Created with assistance from the Battelle Memorial Institute in the United States, it is the oldest of the many science-related government research institutes in Korea.

¶21. Currently KIST has 666 full-time employees (350 of whom are PhDs), including five U.S. nationals. It is chartered to promote basic and applied sciences in Korea and performs large-scale national R&D projects through its six research divisions: Convergence Technology, Nano-Science, Materials Science and Technology, Intelligent Systems, Energy & Environment, and Life Sciences.

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¶22. KIST maintains a long-standing relationship with Battelle Memorial Institute, a private and non-profit applied science and technology development company headquartered in Ohio. It has also engaged in collaborative research with MIT in the field of spintronics and with Carnegie Mellon University in robotics.

¶23. On August 27, Dr. Hann Hong-taek (Thomas Hahn), a Korean American, was inaugurated as KIST's new President. He holds a B.S. in Mechanical Engineering from Seoul National University (1964) and a Ph.D. in Engineering Mechanics from Penn State (1971). He most recently was Chair of the Department of Mechanical and Aerospace Engineering at UCLA.

TOKOLA